
Evaluating Post Merger Conduct in Hospital Markets

**Department of
Justice/Federal Trade Commission Hearings on Health Care and
Competition Law and Policy**

April 11, 2003

**Seth Sacher
Charles River Associates**

My talk will focus on two issues.

- **My own research evaluating post-merger conduct (Vita and Sacher (2001))**
- **Other suggestions for evaluating post-merger conduct**

Vita and Sacher paper makes three contributions.

- **Effects of Mergers Generally**
- **Effects of Hospital Mergers**
- **Effects of Mergers Between Non Profit Entities**

There are numerous studies of hospital competition.

- **Early studies (before mid-1980s) focused on relationship between concentration and costs**
 - **More competitors, higher costs**
- **More recent studies (post mid-1980s) focus on relationship between concentration and price**
 - **More competitors, lower price**

Studies may not be entirely relevant to merger policy.

- **Econometric issues**
 - **Defining relevant geographic market**
- **Don't directly address question of effect of mergers**
- **At least one major study found this relationship didn't hold for non-profits**
 - **Although others have contradicted result**

Two strands in the literature examining post-merger behavior

- **Relative Price Approach**
 - **Barton and Sherman (1984), Kim and Singal (1993)**
- **Price Equation Approach**
 - **Schumann et al (1992, 1997)**
- **Our analysis combined both methodological approaches**

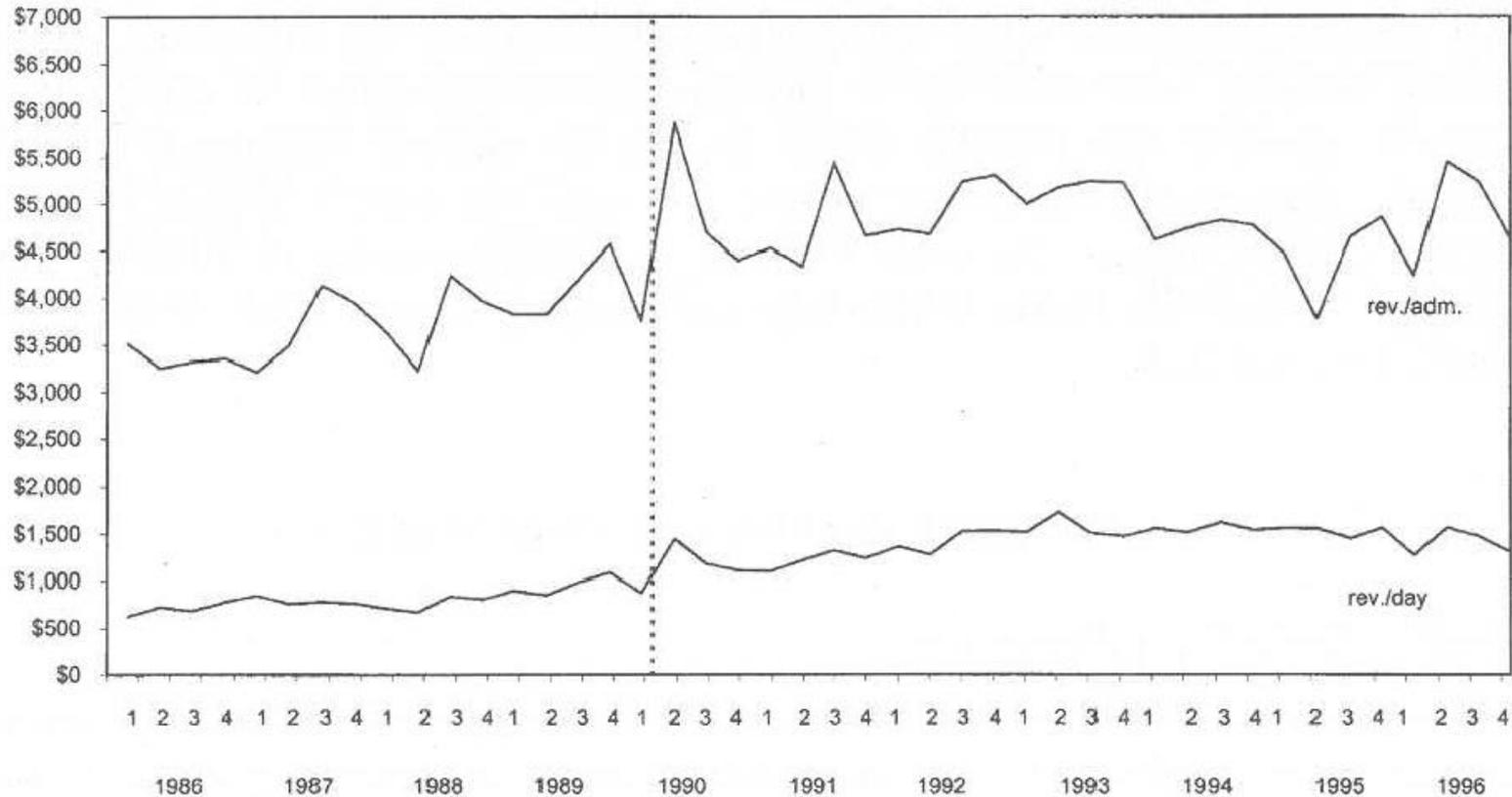
History of the transaction.

- 1. March 8, 1990—Dominican Santa Cruz (259 beds) purchases AMI-Community Hospital (180 beds)**
- 2. August 1990—AMI-Community converted to skilled nursing/rehabilitation facility.**
- 3. March 1993—FTC accepts a consent with Dominican Healthcare West**
- 4. Second quarter 1996—Sutter Health Opens Sutter Maternity and Surgery Center**

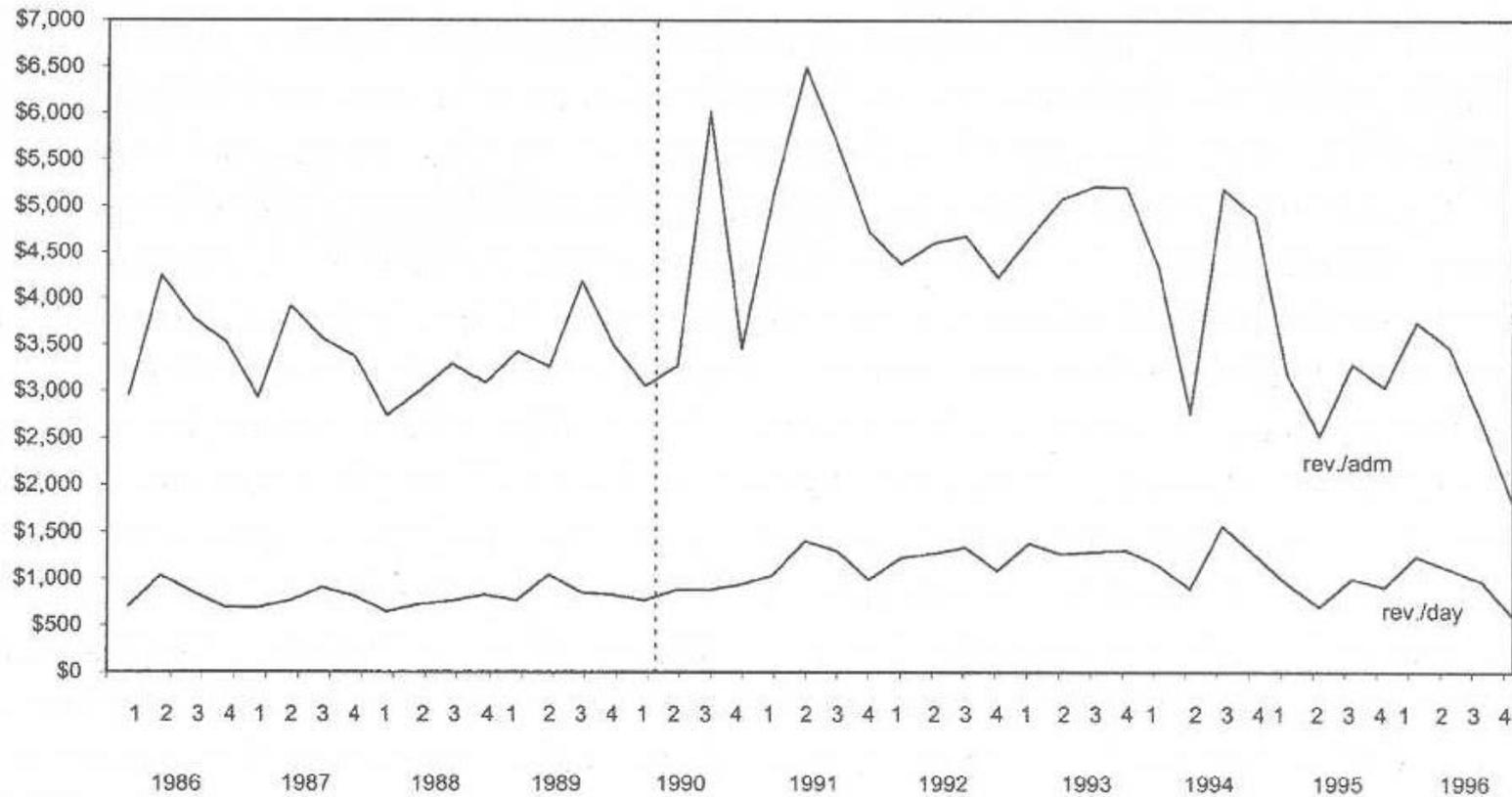
The analysis uses progressively more complicated approaches to test price increase hypothesis.

- **Measure of price uses quarterly OSHPD data (1986-1996)**
- **First look at descriptive presentation of behavior of prices**
- **Increasingly complex statistical analysis**
- **Revenue per admission and “per diem” prices**

Behavior of prices at Dominican over time.



Behavior of prices at Watonsville over time.



Next used a very simple regression.

$$Price = f(Merger, Time)$$

- **Simple regressions suggested substantial price increases**
- **\$700 per admission for Dominican**
- **\$1,800 per admission for Watsonville**

Next step relied on simple concept that price is determined by demand and supply.

Demand = Supply

Price = f (Demand, Supply)

Price = f (Demand factors, Supply (cost factors))

We employed many variables to control for cost changes over time

- **Casemix**
- **Average Length of Stay**
- **Input price changes**
- **Earthquake dummy**

We employed many variables to control for demand changes over time

- **HMO discharges**
- **Per capita income**
- **County level unemployment**
- **Population density**
- **Share of admissions covered by Medicare, Medical**
- **Variable for entry of Sutter Health**

More complex regression continued to indicate substantial price increases.

Price = f (Demand, Cost, Merger, Time)

- **\$749 per admission for Dominican**
- **\$496 per admission for Watsonville**

Augmented complex specification with 'peer group controls.'

- **Constructed a 'peer group' of California hospitals using OSHPD studies.**
 - **Hospitals of similar size**
 - **Not in major PMSAs**
 - **Eliminated hospitals involved in mergers or located in counties where mergers had taken place**
 - **16 hospitals in 'peer group'**

Substantial price increases again indicated.

***Price = f (Demand, Cost, Peer Group
Demand, Peer Group Cost, Merger, Time)***

- **\$1,000 per admission for Dominican**
- **\$672 per admission for Watsonville**

Increased market power most compelling explanation for post-merger price increase.

- **Parties made no quality related arguments.**
- **Volume related quality increase not compelling explanation of price increase.**
- **Tested whether changes in expenditures indicated quality increase**
- **Changes in patient flow not consistent with quality hypothesis**

FTC working paper further exploring patient flow issues.

- **Simpson (2001)**
- **Divided consumers of Santa Cruz hospitals into regions depending on distance**
- **Overall found a decrease in market share of area hospitals, although not large**
- **Market share decline highest in most distant areas**

Post merger conduct can be successfully evaluated.

- **Looking at consummated mergers presents opportunities not available in the ‘normal’ prospective analysis**
 - **Price changes can be evaluated**
 - **Quality/cost saving claims can be assessed**
 - **Changes in patient flow data can be assessed in a “dynamic” context**